



PEST MANAGEMENT FOR FOOD PROFESSIONALS

Why Should I Be Concerned; Isn't Pest Management The Responsibility Of The Pest Control Operator?

Pest management is the responsibility of *all* employees that work within a food establishment. The pest control operator (PCO) is a vital team member of an effective pest management program, but it takes every employee to successfully protect food from diseases carried by pests. In fact, the Kansas Food Code places the responsibility for effective pest management on the food establishment, not the PCO.¹



German Cockroaches in a Crack

What Pests Should I Be Concerned With As A Food Professional?

While any pest has the potential to contaminate food and equipment, some are more prevalent and possess a higher risk than others as vectors of foodborne disease; these pests include: Beetles (e.g. lesser mealworm), Cockroaches (e.g. German cockroach), Synanthropic Flies (e.g. house fly, fruit fly), and Rodants (e.g. mice, rats). These pests have been associated with the transmission of foodborne disease causing pathogens of *Salmonella spp.*^{2,3}, *Escherichia coli*², *Leptospira*³, & *Shigella*⁴ and parasites of *hookworm*⁴, *pinworms*⁴, & *tapeworms*⁴. Additionally, cockroaches produce allergens that are known to aggravate allergies and asthma⁴. As a food professional, your focus should be on trying to eliminate ALL pests from your establishment.

PREVENTION
IS EASIER
THAN
ELIMINATION

How do I keep pests out of my establishment?

By the time pests are observed within an establishment, an infestation has normally already occurred and elimination can be both difficult and costly. Prevention is easier than elimination. Pests can be kept out by using Integrated Pest Management (IPM). IPM focuses on two parts – prevention and control – and has three basic rules: (1) Deny pests access to the establishment; (2) Deny pests food, water, and a place to hide or nest; and (3) Work in partnership with a PCO to eliminate any pest that does gain access to the establishment.



PEST MANAGEMENT (continued)

INTEGRATED PEST MANAGEMENT		
PREVENTION		CONTROL
Deny Access	Deny Food/Shelter	Pest Control Operator
<ul style="list-style-type: none"> ➤ Tight seals on all exterior doors. ➤ Screens on all windows. ➤ Inspect all shipments before bringing into establishment. ➤ Caulk / seal all openings in exterior walls, interior walls, and around pipes / conduit. ➤ Screen vent openings. ➤ Cover floor drains. ➤ Keep drive-thru windows closed when not actively using. ➤ Install self-closing doors. ➤ Install door sweeps on all exterior doors. ➤ Use air curtains (air doors / fly fans) to keep flying pests out. 	<ul style="list-style-type: none"> ➤ Store food a minimum of 6-inches off floor. ➤ Cover food and waste containers with tight fitting lids. ➤ Remove empty cardboard boxes from establishment. ➤ Empty trash receptacles regularly. ➤ Repair any plumbing leaks. ➤ Clean-up spills immediately. ➤ Clean and sanitize under and around equipment and food stores regularly. ➤ Eliminate clutter. 	<ul style="list-style-type: none"> ➤ Survey (trap) pests throughout establishment to determine extent of infestation and harborage & nesting areas. ➤ Target harborage & nesting areas. This has been proven to be more effective than spraying everywhere and reduces the potential for cross-contamination with food. ➤ Non-toxic methods of control preferred. ➤ Only pesticides approved for use in a food establishment may be used and only by a PCO licensed/certified in the administration of pesticides.

Help! I have pests, now what?

Do not panic. It will take some effort, but pests can be eliminated. First, work closely with your PCO to determine the best course of action. Second, review your established procedures to ensure proper IPM prevention has been incorporated and make changes as necessary. Third, stay vigilant; an infestation can take several weeks or months to clear-up. Continue control measures even if it appears the pests have been eliminated; eggs could still be present. Fourth, work with your Public Health Sanitarian/Health Inspector. (S)he can help you explore possible courses of action. Finally, review the *Pest Identification for Food Professionals*, *Cockroach Control*, and *Rodent Control* handouts for species specific control measures. These are available online at <http://wichita.gov/CityOffices/Environmental/>.



Additional Resource Links

Kansas State University, Department of Entomology <http://www.entomology.ksu.edu/>

University of Florida, Department of Entomology & Nematology, Electronic Data Information Source <http://edis.ifas.ufl.edu/>

Cockroach Control Manual, University of Nebraska-Lincoln
<http://lanaster.unl.edu/pest/RoachManual.shtml>

¹ See Chapter 6 § 6-501.111(C) of the 2005 Kansas Food Code.

² Blazar, J. M., Lienau, E. K., & Allard, M. W. (2011). Insects as vectors of foodborne pathogenic bacteria. *Terrestrial Arthropod Reviews*, 4, 5-16.

³ Centers for Disease Control and Prevention. (2011, June 7). *Diseases directly transmitted by rodents*. Atlanta, GA: Unknown. Retrieved on November 23, 2011 from <http://www.cdc.gov/rodents/diseases/direct.html>.

⁴ Ogg, B. (n.d.). *German Cockroaches*. Retrieved from the University of Nebraska-Lincoln, Extension Center Web site: <http://lanaster.unl.edu/pest/resources/GermanRoach.shtml>.